



Device Material Content

5555 NE Moore Ct.
Hillsboro OR 97124
custreq@latticesemi.com

November, 2020

Package: 554 caBGA
Total Device Weight: 1.79 Grams

Package Code: BG554

Products: FE5

Assembly: ASEM
Size (mm): 23 x 23
Lead pitch (mm): 0.8
MSL: 3
Reflow max (°C): 260

	% of Total Pkg. Wt.	Weight (g)	% of Total Pkg. Wt.	Weight (g)	Substance	CAS #	% of Subst.	Notes / Assumptions:
Die	1.49%	0.0267	1.49%	0.0267	Silicon chip	7440-21-3	100.00%	Die size: 6.55 x 7.04mm
Mold Compound	44.60%	0.7979	3.12%	0.0559	Epoxy Resin	-	7.00%	Mold Compound: Sumitomo G750SE (ULA)
			2.23%	0.0399	Phenol Novolac	9003-35-4	5.00%	
			2.23%	0.0399	Metal Hydroxide	-	5.00%	
			0.22%	0.0040	Carbon Black	1333-86-4	0.50%	
			36.80%	0.6583	Silica Fused	60676-86-0	82.50%	
D/A Epoxy	0.22%	0.0039	0.18%	0.00315	Silver	7440-22-4	80.00%	Die attach epoxy: Henkel (Ablebond) 2100A
			0.04%	0.00079	Esters & resins	-	20.00%	
Wire	0.18%	0.0032	0.18%	0.0032	Copper	7440-50-8	98.50%	0.8 mil diameter; 1 wire per solder ball
			0.00%	0.0000	Palladium	7440-05-3	1.50%	
Solder Balls	7.72%	0.1381	7.45%	0.1333	Tin (Sn)	7440-31-5	96.50%	SAC305
			0.23%	0.0041	Silver (Ag)	7440-22-4	3.00%	
			0.04%	0.0007	Copper (Cu)	7440-50-8	0.50%	
Substrate	29.76%	0.5325	9.52%	0.1704	BT Resins	-	32.00%	BT Resin CCL-HL832NX-A
			20.24%	0.3621	Glass fiber	65997-17-3	68.00%	
Foil	11.12%	0.1990	9.41%	0.1683	Copper	7440-50-8	84.56%	
			1.63%	0.0292	Nickel plating	7440-02-0	14.70%	
			0.08%	0.0015	Gold plating	7440-57-5	0.74%	
Solder Mask	4.90%	0.0877	2.76%	0.0493	Quartz	14808-60-7	56.20%	Solder mask PSR4000 AUS 308
			0.78%	0.0140	3-methoxy-3-methylbutylacetate	103429-90-9	16.00%	
			1.08%	0.0193	Barium Sulfate	7727-43-7	22.00%	
			0.15%	0.0026	Talc	14807-96-6	3.00%	
			0.02%	0.0004	Naphthalene	91-20-3	0.50%	
			0.11%	0.0020	Trade secret ingredients	-	2.30%	

Lattice regards this materials information to be correct but makes no guarantee as to its accuracy or completeness, including, but not limited to, with respect to its compliance with applicable environmental laws and regulations. Lattice subcontracts the production, test and assembly of hardware devices to independent third-party vendors and materials suppliers ("Contractors"). All data provided hereunder is based on information received from Contractors. Lattice has not independently verified the accuracy or completeness of this information which is provided solely for your reference in connection with the use of Lattice products.
www.latticesemi.com

